



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/336,116	06/18/99	LAM	82225-P1423D

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EXAMINER
AHMED, S

ART UNIT
1746

PAPER NUMBER
4

DATE MAILED: 09/20/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/336,116

Applicant(s)

LAM, CHUNG

Examiner

Shamim Ahmed

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 June 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 9, 13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Wensink (5,443,675).

Wensink discloses a decapsulating process for an integrated circuits (IC) to open plastic mold package, wherein the integrated circuit is mounted to a connector board, which establishes the electrical connection with the integrated circuit to be tested. So, the connector board is nothing but a printed circuit board. Wensink also discloses an etch head or injection head is provided for supplying decapsulating fluid that sprayed onto the integrated circuit (col.1, lines 8-25, col.4, lines 7-29). Wensink further discloses that the etch head is removably attached with the integrated circuit or the fixture having IC attached with the connector or circuit board (col.4, lines 56-64). So, Wensink inherently teach that the IC is clamped with the etch head or the injection head.

As to claim 13, Wensink teaches that the etch head or the injection head having a nozzle disposed above the integrated circuit package that is in fluid communication with an inlet port and a return or suction port (see figure 1). As to claim 16, Wensink introducing a top plate (18) with a cavity (20), wherein the plate is etch resistant. So, the

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plate around the cavity works as a sealant for preventing the etchant or the decapsulating fluid to enter the circuit board (figure 1).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wensink (5,443,675) in view of Winsemius et al (5,792,305).

Wensink discussed above which is applied to claims 9 and 13, but fails to discuss a step of controlling the flow of the decapsulating fluid through a pair of tubes as the context of claims 11 and 14.

However, Winsemius et al disclose a decapsulating system having a pair of tubes including corresponding valves to control the flow of the decapsulating fluid, wherein the valve is intermittently activated to pulse the fluid flow to reduce the consumption of the decapsulating fluid (col.6, lines 31-40, col.7, lines 25-29 and also figure 1).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of claimed invention to introduce a pair of tubes with corresponding valves to control the flow of the decapsulating fluid as taught by Winsemius et al. By doing so, one could reduce the consumption of the encapsulating fluid as taught by Winsemius et al.

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3. Claims 10,12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wensink in view of Buck et al (5,489,854).

Wensink discussed above as applied to claims 9 and 13 but fails to teach the introduction of a stub that is plugged into a tray to support the circuit board.

However, Buck et al disclose spring biased contacts that can be used to align and hold a printed circuit board, wherein an IC chip or a device under test (DUT) is mounted on the board (col.1, lines 9-12, col.2, lines 6-17, figure 5).

Therefore, it would have been obvious to one skill in the art at the time of claimed invention to employ Buck et al's teaching into Wensink's method for supporting the circuit board by fixedly positioning the circuit board as taught by Buck et al.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Steffen et al (4,857,483) disclose a method for the encapsulation of an integrated circuit on a printed circuit board; Chia et al (5,643,835) disclose a process of mounting a semiconductor device to a printed circuit board.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shamim Ahmed whose telephone number is (703) 305-1929. The examiner can normally be reached on M-Thu (7:00-5:30) Every Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (703) 308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-

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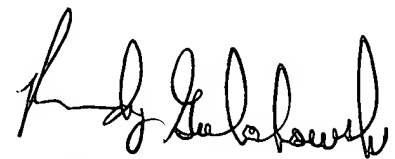
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305-7719 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

SA
September 18, 2001



RANDY GULAKOWSKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700